

## Questions and Answers

### New Arsenic Regulations --- Implementation and Compliance

December 2005

The U.S. Environmental Protection Agency (USEPA) has adopted a revised MCL for arsenic of 0.010 mg/L, along with monitoring requirements, arsenic health effects language, and best available technologies for arsenic mitigation. The compliance date for the new MCL is January 23, 2006. Although the California Department of Health Services (DHS) is in the process of adopting new regulations, it is unknown when the state regulations will be adopted.

In the meantime, DHS plans to initiate implementation of the new federal requirements in January 2006. The following information is intended to facilitate water system compliance with these requirements and explain the relationship between compliance with the new federal rule and the yet-to-be-adopted state rule.

<b>2005 and the pending state MCL.....</b>	<b>2</b>
<i>Preparation for MCL: What should a water system be doing now in anticipation of the new MCL taking effect in January 2006? .....</i>	<i>2</i>
<i>State MCL: What will the state MCL be? .....</i>	<i>3</i>
<i>State MCL status: When will the state adopt its revised MCL? .....</i>	<i>3</i>
<b>DHS enforcement of federal rule and affected systems .....</b>	<b>3</b>
<i>Arsenic MCL enforcement: Will DHS enforce the federal MCL of 0.010 mg/L if the state regulation has not been adopted as of January 2006? .....</i>	<i>3</i>
<i>Systems affected: What systems are required to comply with the new federal (and state) arsenic MCL requirements?.....</i>	<i>3</i>
<b>Monitoring under new requirements .....</b>	<b>4</b>
<i>Monitoring: What monitoring does a water system have to do to be in “compliance with the new requirements”? .....</i>	<i>4</i>
<i>Grandfathering data: If a system collected an arsenic sample in 2005, is it required to grandfather this data? .....</i>	<i>4</i>
<i>Waivers: Is it possible for a source to be waived from monitoring? .....</i>	<i>4</i>
<i>Rounding Policy: What is DHS’s rounding policy for data and data averages? .....</i>	<i>4</i>
<i>Result &lt; 0.010 mg/L: If the sample result is less than or equal to 0.010 mg/L, what is a system required to do? .....</i>	<i>5</i>
<b>Compliance determinations .....</b>	<b>5</b>
<i>Result &gt; 0.010 mg/L: If the sample result is greater than 0.010 mg/L, what is a system required to do?.....</i>	<i>5</i>

<i>Violation timeframe: What is the soonest that a system could be in violation of the revised MCL? .....</i>	<i>6</i>
<i>Source taken offline: Would a system be in violation of the MCL if it did the following: Collected a sample that exceeds the MCL, followed by one or more quarterly samples, then takes the source offline, and initiates a process to install treatment? .....</i>	<i>6</i>
<i>Result &gt;10 times MCL: Are there any special requirements if the arsenic level found in a source exceeds 10 times the MCL? .....</i>	<i>6</i>
<i>MCL exceedance in treated effluent: What happens if a treated effluent sample exceeds the MCL? .....</i>	<i>6</i>
<i>Notification and Consumer Confidence Report .....</i>	<i>7</i>
<i>Notification: What type of notification is required for an arsenic MCL violation? .....</i>	<i>7</i>
<i>CCR: What is required in the Consumer Confidence Report (CCR)? .....</i>	<i>7</i>
<i>Compliance steps.....</i>	<i>8</i>
<i>Timeframe for compliance: What timeframe will DHS allow a water system to bring a source in violation of the MCL into compliance?.....</i>	<i>8</i>
<i>Exemptions: Will DHS grant exemptions for the arsenic MCL? .....</i>	<i>8</i>
<i>Treatment and disposal information: Will DHS provide information regarding treatment and disposal processes and costs? .....</i>	<i>9</i>
<i>POU Treatment: Can I use point-of-use (POU) water treatment devices for compliance?.....</i>	<i>9</i>
<i>Funding coordination: What if a system has applied for SRF or Prop 50 funding to solve the arsenic problem? What if the system has already applied for a different problem---does the system need to reapply or will DHS re-rank the system?.....</i>	<i>9</i>

## **2005 and the pending state MCL**

### **Preparation for MCL: What should a water system be doing now in anticipation of the new MCL taking effect in January 2006?**

If your source water arsenic level is near or exceeds the new federal MCL of 0.010 mg/L, and/or you are applying to DHS for a permit for a new well with arsenic concentrations exceeding 0.010 mg/L, you should:

- Characterize the arsenic concentrations in your source(s) so that you can set up an operations plan to minimize exposure and protect public health to the extent possible during this interim period;
- Consider sampling your source(s) quarterly for arsenic, pH, sulfides, hardness, silica, phosphate, sulfate, iron, manganese and vanadium. This data can assist you in determining your future compliance status to give you extra time to evaluate the best treatment process and design for your particular water.

***If your source water arsenic level is not approaching the new federal MCL, there is nothing special that you need to do.***

**State MCL: What will the state MCL be?**

There is no way to know for certain what the state MCL will be at this time, because the state regulation package is still undergoing review and has not been subject to public comment yet. Since a state MCL cannot be less stringent than a federal MCL, it will definitely not be higher than 0.010 mg/L.

**State MCL status: When will the state adopt its revised MCL?**

Under law, regulation packages must proceed through a number of steps prior to adoption, including:

- Reviews by DHS's Office of Regulations, the Budget Office, Legal Services, and the state Department of Finance,
- A public comment period,
- A final review by the Office of Administrative Law, and finally,
- Signing into the California Code of Regulations by the Secretary of State.

The regulation package is currently still in the early stages of the process. The soonest one could anticipate adoption would be in mid-2006, but it is more more likely to occur later.

You can follow the regulation through its adoption process by going to our website's regulation status page:

<http://www.dhs.ca.gov/ps/ddwem/publications/Regulations/regsdevelopment.htm>

***DHS enforcement of federal rule and affected systems***

**Arsenic MCL enforcement: Will DHS enforce the federal MCL of 0.010 mg/L if the state regulation has not been adopted by January 2006?**

DHS will implement the federal MCL and monitoring requirements; however, it will not have the authority to enforce the MCL, i.e., take enforcement steps such as issuing citations, until the state regulations have taken effect. If a violation should occur, DHS will notify USEPA, which will then take enforcement action. Most likely, both DHS and USEPA will work with you to set up a compliance schedule.

**Systems affected: What systems are required to comply with the new federal (and state) arsenic MCL requirements?**

All community and nontransient-noncommunity (NTNC) water systems must comply with the new requirements beginning in January 2006.

## ***Monitoring under new requirements***

### **Monitoring: What monitoring does a water system have to do to be in compliance with the new requirements?**

- If you are monitoring quarterly for arsenic, continue to do so.
- If you have an arsenic monitoring waiver for a source with any historical data greater than 0.010 mg/L, your waiver will be rescinded and you will need to collect a sample during the first quarter of 2006.
  - If you have an arsenic monitoring waiver for a source that has never exceeded 0.010 mg/L, monitor as required under your waiver.
  - For other sources, collect and analyze an initial sample under the new rule pursuant to your routine compliance monitoring schedule, unless you have a groundwater source that was monitored in 2005.

### **Grandfathering data: If a system collected an arsenic sample in 2005, is it required to grandfather this data?**

No. You have the option of doing so, but are not required to grandfather data because the requirements related to compliance monitoring do not take effect until January 2006. If the sample result was equal to or less than 0.010 mg/L, you may grandfather this sample result and continue monitoring according to your routine compliance monitoring schedule (once/3 years).

If the sample result (or arithmetic average of sample results) exceeds 0.010 mg/L and you grandfathered this data, you would immediately be in violation of the MCL as of January 23, 2006. Before making a decision to grandfather such data, DHS recommends that you contact your regulatory oversight person (DHS or LPA) regarding your existing monitoring compliance schedule, whether to grandfather this data, and when next to sample.

### **Waivers: Is it possible for a source to be waived from monitoring?**

Yes; as for other inorganic chemicals, you may apply to DHS for a waiver from the routine monitoring frequency, if the source has been monitored at least three periods (groundwater) or three years (surface water) and all previous analytical results are less than 0.010 mg/L. The waiver period is nine years during which the source must be monitored once.

### **Rounding Policy: What is DHS's rounding policy for data and data averages?**

The federal regulations require that data must be rounded to the nearest 0.001 mg/l. DHS's 1998 rounding policy is currently under revision and will be consistent with the U.S. EPA's policy for rounding. If the digit following those to be retained is 5 and is only followed by zeroes, the last digit retained is increased by one if it is an odd and is kept unchanged if it is an even number. In other words, any result greater than 0.0105 mg/L would be exceeding the arsenic MCL of 0.010 mg/L. When averaging results, any rounding should be performed after the mathematical operation.

**Result < 0.010 mg/L: If the sample result is less than or equal to 0.010 mg/L, what is a system required to do?**

If the sample result does not exceed 0.010 mg/L, you must sample annually for surface water sources and once every three years for groundwater sources, unless DHS directs you to monitor quarterly because the result and/or historical data indicate levels close to the MCL.

***Compliance determinations***

**Result > 0.010 mg/L: If the sample result is greater than 0.010 mg/L, what is a system required to do?**

1. *a. Initiate compliance determination process:* Notify DHS within 48 hours of receiving the result and collect and analyze three quarterly samples;

**or**

*b. Initiate sample result confirmation process:* Notify DHS within 7 days from receiving the result and collect one additional sample within 14 days to confirm the result. If the average of the two samples collected exceeds the MCL, notify DHS within 48 hours of receiving the result and collect and analyze three consecutive quarterly samples.

2. Average quarterly results with the initial result (i.e., all samples collected in a twelve-month period) to determine whether the source is in violation of the new MCL; and

3. Proceed as follows:

- Average exceeds 0.010 mg/L: You are in violation of the revised standard. Contact DHS, notify the public and take steps to come into compliance (see info below for more details); note that a 0.0105 average rounds to 0.010 and is not a violation, while 0.01051 or 0.0106 rounds to 0.011 and is a violation
- Average does not exceed 0.010 mg/L: Monitor the source quarterly until DHS determines that the source is reliably and consistently below the MCL. A minimum of two quarterly samples that have levels below the MCL would be required before DHS would consider reducing the monitoring frequency.

Note that compliance is based on the quarterly samples collected during a period of twelve months (running annual average); if a system fails to collect all four quarters, compliance will be determined at the end of the last quarter during which monitoring was required by averaging those samples that were collected.

If the result of any one sample collected would cause the annual average to exceed the MCL (e.g., sum of sample results to date exceeds 0.042 mg/L), the source is immediately in violation of the MCL.

**Violation timeframe: What is the soonest that a system could be in violation of the revised MCL?**

If you choose to grandfather a sample result, or average of results, collected in 2005 and that result exceeds 0.010 mg/L, you would be in violation as of January 23, 2006.

If you do not choose to grandfather 2005 data, the soonest your source could be in violation would be three quarters after you collect the initial sample exceeding the MCL that triggers you into quarterly monitoring to determine your compliance status, unless the sum of sample results exceeds 0.042 mg/L before you have collected all the required samples.

**Source taken offline: Would a system be in violation of the MCL if it did the following: Collected a sample that exceeds the MCL, followed by one or more quarterly samples, then takes the source offline, and initiates a process to install treatment?**

No. However, you should consult with your regulatory oversight person (DHS or LPA. Once you take the source offline, you must either initiate an application for an amended permit for treatment and reactivation, request that DHS designate the source as a “standby source”, or disconnect it from the distribution system. Regardless of which option you select, you must include all collected data, along with an explanation of what you are doing and why, in your next Consumer Confidence Report.

If you decide that you want to bring the source back online without treating it, you should notify DHS or your LPA, and you will be required to complete the quarterly monitoring and determine compliance by averaging all the samples collected since the compliance determination was first triggered (prior to going offline) and including the first sample that exceeded the MCL.

**Result >10 times MCL: Are there any special requirements if the arsenic level found in a source exceeds 10 times the MCL?**

There are no special requirements under the new federal regulations. However, the draft state regulations include a requirement that any source with an inorganic chemical at a level greater than 10 times the MCL must be taken off line immediately. Since water systems have been required to be in compliance with the MCL of 0.050 mg/L for many years and that level is only 5 times the new MCL, DHS does not anticipate that any sources will be impacted by this proposed requirement.

**MCL exceedance in treated effluent: What happens if a treated effluent sample exceeds the MCL?**

The objective of the arsenic treatment is to produce water that reliably meets the MCL at all times; the operations plan needs to address how treatment failures will be avoided and how the utility would respond, should one occur. However, if a utility has one or more treated water sample(s) that exceed the MCL, it must notify DHS on the monthly report, including the estimated length of the exceedance(s) and the actions it

took to correct the situation. DHS will review the report and may require additional follow up; depending on the situation, DHS may require a public notice.

## ***Notification and Consumer Confidence Report***

### **Notification: What type of notification is required for an arsenic MCL violation?**

An arsenic MCL violation requires a Tier 2 notification, pursuant to federal regulations and the draft state public notification regulations (see Section 64463.4 in the draft posted at

<http://www.dhs.ca.gov/ps/ddwem/publications/Regulations/R-59-01-RegText.pdf>

You must give the Tier 2 notice as soon as possible and within 30 days after you learn of the violation. In addition, you must:

- Maintain posted notices in place for as long as the violation or occurrence continues, but in no case less than seven days; and
- Repeat the notice every three months as long as the violation continues.

Community water systems: Unless otherwise directed by DHS in writing based on its assessment of the violation, community water systems must give public notice by

- Mail or direct delivery to each customer receiving a bill including those that provide their drinking water to others (e.g., schools or school systems, apartment building owners, or large private employers), and other service connections to which water is delivered by the water system; and
- Using one or more of the following methods to reach persons not likely to be reached by a mailing or direct delivery (renters, university students, nursing home patients, prison inmates, etc.):
  - Publication in a local newspaper;
  - Posting in public places served by the water system, or on the Internet; or
  - Delivery to community organizations.

Nontransient-noncommunity water systems (NTNC): Unless otherwise directed by DHS in writing based on its assessment of the violation, NTNC water systems must give the public notice by:

- Posting in conspicuous locations throughout the area served by the water system; and
- Using one or more of the following methods to reach persons not likely to be reached by a public posting:
  - Publication in a local newspaper or newsletter distributed to customers;
  - E-mail message to employees or students;
  - Posting on the Internet or intranet; or
  - Direct delivery to each customer.

### **CCR: What is required in the Consumer Confidence Report (CCR)?**

2005 Report (due July 2006):

Since monitoring for compliance with the MCL is not required to begin until January 2006, and the CCRs due in July of 2006 report data for the year 2005, the CCR will not differ in regards to arsenic from the 2003 CCR distributed by July 2004; for more details, see 2006 CCR guidance at <http://www.dhs.ca.gov/ps/ddwem/publications/CCR/ccrindex.htm>

Note that the 2005 CCRs require special health effects language for levels between 0.005 and 0.010 mg/L and additional language for levels between 0.010 and 0.050 mg/L, as detailed in the guidance.

**2006 Report (due July 2007):**

The 2006 CCR is the first that could include a violation of the revised arsenic MCL, since 2006 is the first year during which compliance monitoring is required. As with all other violations, you would be required to highlight it and explain how you are addressing the violation (e.g., treatment, taking source offline). The CCR guidance for this report will be available in late 2006/early 2007.

## ***Compliance steps***

**Timeframe for compliance: What timeframe will DHS allow a water system to bring a source in violation of the MCL into compliance?**

DHS will work with each water system to set up a specific compliance schedule that protects public health and considers the particular issues that the water system must address to install treatment and serve water meeting the MCL. If the state has not adopted its regulations at the time that a system experiences a violation, USEPA and DHS will consult in setting up the compliance schedule.

**Exemptions: Will DHS grant exemptions for the arsenic MCL?**

DHS will grant exemptions if a water system meets the applicable criteria, but DHS will not review exemption applications until after January 2006. If you wish to apply before this date, you may submit your application to DHS and DHS will transmit it to the appropriate staff person at USEPA. DHS expects to have developed its own application procedures and criteria for exemptions in the near future.

For your information, the USEPA has developed comprehensive guidance on exemptions for the arsenic regulations, which is available at [http://www.epa.gov/safewater/arsenic/pdfs/ars\\_final\\_app\\_g.pdf](http://www.epa.gov/safewater/arsenic/pdfs/ars_final_app_g.pdf)

DHS recommends that you carefully evaluate the pros and cons of exemptions. An exemption does not mean that you do not have to comply with the MCL. It also does not mean that you will get more time to come into compliance; in fact, depending on system size and arsenic concentration, the potential exists that you could end up with far less time. If you meet the extensive criteria involved (and DHS' criteria may be more stringent than USEPA's), the primary advantage to your system is that you are not subject to a legal suit during the interim between the granting of the exemption and your



coming into compliance with the MCL. USEPA has specified the exemption timeframes depending on system size and arsenic concentration and there is no flexibility.

**Treatment and disposal information: Will DHS provide information regarding treatment and disposal processes and costs?**

The USEPA has developed extensive guidance for the revised arsenic regulations, which includes a decision tree, along with a link to the Arsenic Treatment Technology Evaluation Handbook for Small Systems (EPA 816-R-03-014, arsenic mitigation strategies beginning on page 11 and decision trees beginning on page 43):

[http://www.epa.gov/safewater/arsenic/pdfs/handbook\\_arsenic\\_treatment-tech.pdf](http://www.epa.gov/safewater/arsenic/pdfs/handbook_arsenic_treatment-tech.pdf)

Additional information is available at <http://www.epa.gov/safewater/arsenic.html>. A link is provided to Technologies and Costs for Removal of Arsenic from Drinking Water (EPA 815-R-00-028). This document contains a somewhat more technical discussion of treatment and disposal processes, along with cost curves.

Information on treatment residual disposal options and costs can be found in a series of papers developed under the Association of California Water Agencies through this link:

<http://www.acwanet.com/mediazone/research/>

**POU Treatment: Can I use point-of-use (POU) water treatment devices for compliance?**

California law provides for use of point-of-entry, but not POU devices; DHS is working to change the law.

In the meantime, DHS is developing guidance related to POU devices; check the drinking water program website during coming months:

<http://www.dhs.ca.gov/ps/ddwem/chemicals/arsenic/newmcl.htm>

Note that only devices certified under the DHS Water Treatment Device Certification Program will be acceptable for use. See

<http://www.dhs.ca.gov/ps/ddwem/technical/certification/devices.html>

**Funding coordination: What if a system has applied for SRF or Prop 50 funding to solve the arsenic problem? What if the system has already applied for a different problem---does the system need to reapply or will DHS re-rank the system?**

If the system has applied for an arsenic problem, it need not resubmit a pre-application and it will stay in the same rank as before.

If the system has applied for a problem other than arsenic, but now has data indicating that it will exceed the new arsenic MCL and wishes to apply for arsenic as

well, then a new pre-application might need to be submitted during the next application cycle. To be certain, the system should contact their district engineer.